MG

O'Laughlin & Paris LLP

Attorneys at Law

May 11, 2004

Mr. Mark Gowdy
Water Resources Control Engineer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Re: **Stockton Deep Water Ship Channel Dissolved Oxygen TMDL and Basin Plan Amendment Public Review Draft Staff Report**

Dear Mr. Gowdy:

The San Joaquin River Group Authority (hereinafter "SJRGA") submits the following comments on the "Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control Program for Factors Contributing to the Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel, Public Review Draft Staff Report, April 2004" (hereinafter "Staff Report").

I. BACKGROUND

The Clean Water Act ("CWA") establishes a process for bringing a waterbody into compliance with its water quality objectives where technology-based effluent limitations on point source discharges alone are insufficient. The Total Maximum Daily Load ("TMDL") process and its implementing provisions of the CWA require the State to establish the maximum quantities of a pollutant that may be added (i.e., "loading capacity") and allocate responsibility for reducing the pollutant on the point and non-point source contributors of the pollutant (through "waste load" and "load" allocations). In some cases a TMDL may require that limitations more stringent than the applicable technology-based standards be imposed on point source discharges in order to assure that the water quality objectives are achieved

The Central Valley Regional Water Quality Control Board staff propose a TMDL and program of implementation for dissolved oxygen ("DO") impairment in the Stockton Deep Water Ship Channel ("DWSC" or "Ship Channel") that is unprecedented in its approach, and legally impermissible because the TMDL fails to follow the law and lacks sufficient basis for the proposed actions. Contrary to the CWA, the TMDL allocates responsibility for decreasing DO pollutant loading to environmental conditions that are not "sources" of the DO load, namely flow and DWSC channel geometry. The proposed TMDL thus fails to satisfy the CWA requirement that water quality objectives for impaired waterbodies be accomplished through source load allocations. As drafted, the proposed TMDL and program of implementation also suffer significant technical and procedural defects and must be revised.

2571 California Park Dr., Suite 210
Chico, California 95928
www.olaughlinandparis.com

530.899.9755 tel
530.899.1367 fax

II. SUMMARY OF THE STAFF DRAFT PROPOSED TMDL AND PROGRAM OF IMPLEMENTATION

The Staff Report suggests that three factors contribute to DO impairment of the Ship Channel: (1) loads of oxygen demanding substances from upstream point and non-point sources react to reduce DO; (2) DWSC channel geometry intensifies the impacts of the reactions of oxygen demanding substances; and (3) reduced flow through the DWSC increases the residence time for these reaction mechanisms. (Staff Report, at 1-2, 27.) The Staff Report proposes to "apportion" the loading capacity among each of these three factors in equal proportions, less a margin of safety. (*Id.*, at 2, 38). This proposal was made notwithstanding the Staff Report's concession that flow and geometry are not "loads of substances for which mass or concentration limits can be assigned." (*Id.*, at 38).

The first factor, oxygen-demanding substances, is allocated one-third of the total loading capacity. Of the loading capacity for oxygen demanding substances, 30 percent is specifically allocated as the waste load of the City of Stockton wastewater treatment plant. The remainder of the load of oxygen demanding substances is attributable to various point and non-point sources that are not described in any meaningful detail. (*See id.* at 46-47). While the report mentions the potential contributions of DO from regulated point source dischargers including the wastewater treatment plants of Manteca, Tracy, Modesto and Turlock and the stormwater systems of Stockton and San Joaquin County, Regional Board staff assert that "[c]urrent science is insufficient to determine the relative contribution from other wastewater, stormwater, and other agricultural sources." (*Id.*, at 2; *see also id.* at 46-47). The specific load allocation for the City of Stockton is the only specific load allocation in the entire TMDL.

One-third of loading capacity is allocated to DWSC geometry. Regional Board staff identify Ship Channel dredging and maintenance activities of the US Army Corps of Engineers and Port of Stockton as primarily responsible. The remaining one-third is allocated to the reduction of flow through the DWSC caused by upstream water rights holders and water management activities in the South Delta, namely the state and federal water pumping facilities.

The proposed program of implementation describes actions the Regional Board staff suggest are necessary to accomplish the loading reductions. It includes actions the Regional Board may take immediately and those that it can impose on future activities. However, the vast majority of the actions necessary to achieve the DO loading reductions are merely actions "recommended for implementation by agencies other than the CVRWQCB." (*Id.*, at 5-6, 47-51). The implementation program is phased such that the parties contributing to the three DO impairment factors as requested to monitor and study the problem to enable the Regional Board staff to develop specific waste load and load allocations and other actions.

The Regional Board may take immediate action to enforce the waste load and load allocations pursuant to Porter-Cologne Water Quality Control Act ("Porter-Cologne") regulatory authority to issue new and enforce existing NPDES permits (for point source dischargers) and

waste discharge requirements (for non-point sources). (*Id.*, at 2-3, 16-18, 45-47; *see* Cal. Water Code §§ 13370 et seq. (NDPES permits), 13260 et seq. (waste discharge requirements) for Regional Board's authority). These actions would enable the Regional Board to address the DO loading for point and non-point sources of oxygen demanding substances only, one-third of the proposed allocation of loading capacity. The Regional Board would also utilize its authority to require mitigation for future activities requiring federal permits that may affect DWSC DO, such as dredge and fill projects or hydropower facility relicensing, pursuant to its review under CWA section 401. (*Id.*, at 3, 17, 47-51; *see* 33 U.S.C. § 1341(a)(1) and Cal. Water Code § 13160 et seq. for Regional Board's authority).

The majority of the actions necessary to accomplish the remaining load reductions are not within the Regional Board's authority, however. The other actions are those recommended to be taken by other agencies. For example, the report recommends that the State Board "use its water rights authority to assign responsibilities for mitigating the impact on oxygen demand loading capacity to existing and future activities that reduce flow through the DWSC" and that all state, federal and local water resource management agencies evaluate and mitigate existing and proposed water resource projects' impact on DO. (Staff Report, at 6). The program of implementation offers no assurances that the actions recommended for other agencies will achieve the intended load reductions.

III. LEGAL STANDARDS FOR PREPARATION OF TMDL AND PROGRAM OF IMPLEMENTATION

A. Section 303(d) of the Clean Water Act

The CWA establishes a process for ensuring that waterbodies are brought into compliance with its water quality objectives. Section 301 requires the Regional Board to establish and enforce technology-based effluent limitations on point source dischargers. (33 U.S.C. § 1311(b); Cal. Water Code § 13370). Section 303(d) of the CWA requires the Regional Boards to identify the waterbodies for which effluent limitations are not stringent enough to achieve the applicable water quality objectives in the Basin Plan. (*Id.* § 1313(d)(1)(B)). For each of these "impaired" waterbodies, the Regional Boards must establish the total maximum daily load for each "pollutant" preventing attainment of the water quality objectives. (*Id.*, § 1313(d)(1)(C); 40 CFR § 130.7(c)(1)).

Federal regulations define TMDL as the "sum of the individual [waste load allocations] for point sources and [load allocations] for nonpoint sources and natural background." (40 CFR § 130.2(i)). Waste load allocation is the "portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution." (*Id.*, § 130.2(h)). Load allocation is the "portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources." (*Id.*, § 130.2(g)). Put another way, "'[a] TMDL defines the specified maximum amount of a pollutant which can be discharged or 'loaded' into the waters at issue from all combined sources.'"

(*Pronsolino v. Nastri* (9th Cir. 2002) 291 F.3d 1123, 1127-1128, *cert. den.*, 123 S.Ct. 2573, 156 L.Ed.2d 602, (Jun. 16, 2003), *citing Dioxin/Organochlorine Center v. Clark* (9th Cir. 1995) 57 F.3d 1517, 1520).

The TMDL must be set at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. (40 CFR § 130.2(g)).

B. Program of Implementation

Section 303(e) of the CWA requires the State to provide as part of its continuing planning process adequate implementation, including schedules of compliance, for all navigable waters within the State. (33 USC § 1313(e)(3)(A)). The establishment of TMDLs and its accompanying implementation plan are elements of this continuing planning process. The State planning process for TMDLs is contained in the Porter-Cologne Act, which requires the Regional Board to develop a "program of implementation" for each TMDL. (Cal. Water Code § 13242). The program of implementation shall include actions that are necessary to achieve the objectives, including recommendations for appropriate action by any public or private entity, a time schedule for the actions to be taken, and a monitoring program to determine compliance with objectives. (*Id.*) The TMDL and program of implementation shall be incorporated as an amendment to the Basin Plan.

Draft State Board TMDL policy provides that a Regional Board may rely on regulatory actions of other agencies as part of the TMDL program of implementation provided that the Regional Board independently determines that a program being implemented by another entity will be "adequate to correct the impairment." (Draft Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options, pp. 4-5 (Dec. 4, 2003)). Only after the Regional Board makes these findings supported by substantial evidence may it "certify" that regulatory program and incorporate those actions into the TMDL. (*Id.*)

IV. THE STAFF REPORT IMPROPERLY ALLOCATES LOADING CAPACITY

A. Loading Capacity May Not Be Allocated to Flow, Channel Geometry or Other Non-Load Factors

Neither the CWA nor TMDL regulations permit loading capacity to be allocated to anything other than point or non-point "sources" of pollutants. "Waste loads" are allocated to point source discharges and "loads" are allocated to nonpoint source discharges and natural background sources. (40 CFR § 130.2(g), (h)). The proposed TMDL impermissibly provides relative "apportioning" of loading capacity to the three factors, two of which are not sources for which loads may be allocated.

EPA regulations contemplate the effect of environmental factors, such as stream flow, on loading capacity in formulating TMDLs. The regulations provide that TMDLs shall "take into account critical conditions for stream flow" and other environmental conditions. (40 CFR § 130.7(c)(1)). As a result, loading capacity may have only a maximum based on low flow conditions, or may have a sliding scale based on varying flow conditions, all while assuring compliance with water quality objectives. Accordingly, EPA has already rejected the Staff proposal that loading capacity be allocated to those non-load factors. Therefore, waste load and load shall be allocated among the point and non-point sources and shall be adjusted for given stream flow and channel geometry conditions.

B. All Loading Capacity Must be Allocated to Point and Non-point Sources

The CWA and regulations make no provision for allocating only a portion of loading capacity to point and non-point sources. In fact, because the CWA provides that NPDES permits shall include "any more stringent limitation . . . necessary to meet water quality standards," the responsibility for reducing loading capacity in a TMDL falls to the point source dischargers if the load allocations for non-point sources are infeasible or ineffective. (33 U.S.C. §§ 1311(b)(1)(C), 1313(e)(3)(A)). The Staff Report does not indicate whether more stringent waste load allocations may be required. Even if more stringent waste load allocations are required, the Staff Report assumes that combined waste load and load allocations would only be required to address one-third of the DO loading under the proposed TMDL.

Similarly, point sources may not receive less stringent waste load allocations unless the non-point source allocations are actually practicable. (40 CFR §§ 130.2(i), 120.44(d)). EPA Region IX policy guidance provides that practicability is shown where the load allocations are "technically feasible and reasonably assured of being implemented in a reasonable period of time." (Guidance for Developing TMDLs in California, p. 10 (January 7, 2000)). Reasonable assurances may be provided through appropriate mechanisms but must include an "actual demonstration that the measures identified will actually obtain the predicted reductions and that the State is able to assure this result." (*Id.*)

The proposed TMDL provides no assurances that the program of implementation will actually obtain the DO reductions. The Regional Board has regulatory authority over point and non-point source dischargers (of which it has provided a specific waste load/load allocation for one discharger only) and can condition 401 certification to require mitigation for new impacts (which arguably may not be implemented for many years), but it has no authority to address two-thirds of the factors that it identifies as presently causing the DO impairment.

The U.S. EPA has the authority to implement the TMDL program and the Regional Board stands in the shoes of the EPA in implementing the program in California. If the Regional Board fails to enforce the provisions of the TMDL, the EPA would step in to administer enforcement. The courts have made it clear that the federal government has no authority over a state's water rights (*Kansas v. Colorado* (1908) 206 U.S. 46, 93), yet to allow a state agency to

allocate responsibility to flow would give to EPA the power over water rights the courts have previously prohibited.

V. PREPARATION OF THE STAFF REPORT DID NOT COMPLY WITH ESTABLISHED TECHNICAL AND PROCEDURAL STANDARDS

A. Insufficient Technical Basis for Apportionment of Equal Responsibility Among Three Factors

The Staff Report notes considerable scientific and technical uncertainty of the three factors affecting DO and their interactions. (Staff Report, at 27-33, 37). The Staff Report jumps to the conclusion that because arguments can be made "provid[ing] a reasonable technical basis for why each contributing factor is *entirely* responsible for the impairment," responsibility shall be allocated equally among the three factors. (*Id.*, at 39 (emphasis added)). Notwithstanding the fact that the CWA does not allow for *any* load allocations to flow or channel geometry, the equal allocation lacks any technically defensible rationale.[1]

The discussion of flow effects on low DO was cursory at best. Regional Board staff failed to assess whether the water quality objectives could be met with the existing flows, together with a program of compliance from point and non-point source discharges. This may be due in part to a lack of information, but this does not justify compounding the mistake. For example, the Regional Board has acknowledged that thousands of miles of surface waters in the Central Valley are dominated by discharges from irrigated lands (Resolution No. R5-2003-0105), yet does not know the extent of the impact. (*Id.* at 22). Without knowing the extent of the impact, the Regional Board could not perform the necessary assessment. Even if allocation to flow and geometry were possible, the fact that the allocation to channel geometry and flow is not supported by sound technical, scientific or practical bases, makes any such allocation arbitrary and capricious, and it affects every subsequent action in the implementation program. There is no reason the Regional Board should excuse point and non-point source dischargers from two-thirds of the load responsibility until the data show the relative loading capacity reductions possible from said dischargers.

Staff also suggests that while there is a "strong" relationship between reduced flow and low DO in the DWSC, "more field and laboratory studies are required to better understand and quantify the effects of flow." The Regional Board failed to assess what effect increased flow would have on meeting the water quality objectives and the likelihood of success. (*Id.*, at 31-33). The State Board in Decision 1641 found that there is "no evidence in the record showing what flow is necessary to achieve the DO objectives in the absence of a barrier [at the Head of Old River]. Low DO levels have been recorded even when San Joaquin River flows were relatively high." (State Water Resources Control Board Water Right Decision 1641, p. 74 (1999), amended in Order WR 2000-02 (2000)).

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[1] A copy of the SJRGA's technical comments to the Staff Report is attached hereto as Exhibit A.

In essence, the information necessary to allocate responsibility to flow does not exist and this allocation must be eliminated.[2] As noted above, the Regional Board has no authority to allocated loading capacity to flow and geometry. However, nothing prevents the Regional Board from recommending actions to improve flow and channel geometry at the time the Regional Board develops the necessary information to assess the effect of these non-load factors.

B. Apportionment Among Load and Non-load Factors Should be Analyzed under the Porter-Cologne Act Alternatives Selection Criteria

Consistent with State regulations providing that the basin planning process is the functional equivalent of CEQA, the Staff Report applied the following six alternative evaluation criteria in selecting a TMDL and preferred program of implementation: (1) likelihood of success, (2) flexibility, (3) equitability, (4) time for implementation, (5) consistency with state and federal law, and (6) cost of implementation. (Staff Report, at 52-53; *see* Cal. Code Regs., tit. 23, § 3720 et seq.). Staff developed five alternatives that varied according to whether load only or both load and non-load (flow, geometry) factors would be considered, and whether the TMDL would be issued based on current science or postponed until further information was obtained. (*Id.*, at 54-57). Staff selected the alternative that includes allocation to both load and non-load factors with phased implementation, whereby additional studies are completed by 2008, before the CVRWQCB makes specific, detailed load allocations to individual responsible parties.

Staff did not apply those evaluation criteria to the equal allocation of loading capacity to the three factors. Failure to do so is fatal under CEQA. CEQA and State Board regulations require analysis of a reasonable range of alternatives. (Cal. Code Regs., tit. 14, § 15126.6; Cal. Code Regs., tit. 23, § 3777). The equal allocation was not based on any defensible technical, scientific or feasibility criteria.

C. Decision 1641 Requires the Regional Board to Develop a TMDL for Point and Non-point Sources Before the State Board Will Consider Modifying Water Rights for Flow Purposes

The Regional Boards have no regulatory authority to require water rights holders to release additional flow through the DWSC. The authority over water rights is vested in the State Board, which has already contemplated flow and DO objectives for the San Joaquin River. In Decision 1641, the Board considered various factors contributing to the DO problem and concluded that it would not take any action to meet DO objectives until the Central Valley Regional Board has "determine[d] effluent limitations based on TMDL results" and "has established a TMDL and has implemented it before taking further action to achieve the DO objectives." (State Water Resources Control Board Water Right Decision 1641, p. 74 (1999), amended in Order WR 2000-02 (2000)). Accordingly, the proposed Regional Board action conflicts with the State Board's directive.

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[2] The SJRGA identified this lack of information on pages 4-6 of its March 11, 2002 comments on the January 2002 Draft Strawman Report. A copy of these comments is attached hereto as Exhibit B.

Furthermore, the Staff Report's recommendation that the State Board require additional flow releases appears to be for nothing more than increased waste assimilative capacity or dilution in the DWSC. Increased flow for the purposes of increased assimilative capacity or dilution is not a beneficial use of water. (*See* Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, p. II-1.00 (1998)). The legal responsibility of the Regional Board is clear: it must assign waste load and load allocations to sources of pollutants to attain the Basin Plan DO objectives. The Regional Board cannot, in effect, relax standards for sources of pollutants, or fail to enforce the existing standards, and then ask the State Board to assume its obligations.

D. Reliance upon the Synthesis Report is Questionable

The Regional Board staff relies heavily on a document that was characterized as a synthesis of available information. However, the use of this document raises questions for two reasons. First, this document's author, Dr. G. Fred Lee, has recently provided an advocacy piece on Delta water quality issues to DeltaKeeper, raising the specter of bias. Second, Dr. Lee's report was held out to be a synthesis of available information, yet the Regional Board staff made little effort to cite to original material and reports, instead relying on Dr. Lee's interpretations of those reports. Furthermore, it is unclear whether Dr. Lee reviewed and synthesized all available materials or used his discretion in assessing a report's relevancy, thereby introducing a reviewer's bias by omission. The Regional Board staff has inappropriately delegated to Dr. Lee the task of reviewing and interpreting the key scientific evidence. This is improper.

V. CONCLUSION

The SJRGA agrees with the Regional Board's assessment that the DO problem in the Ship Channel is complicated by non-load factors including flow and channel geometry. The SJRGA does not agree with the suggested approach of the Regional Staff to allocate responsibility for reducing loading capacity on these factors. Nearly every TMDL is affected by stream flow and channel geometry. The CWA statute and regulations make no provision for allocating responsibility to these factors. Attempting to allocate responsibility to flow, especially without an assessment of impacts from various dischargers, allows the regional board to avoid its legal responsibility to regulate "discharges" of "pollutants."

The Regional Board has no authority over flow or channel geometry; its legal responsibility is to assure that effluent limitations on point source dischargers are being enforced. To the extent effluent limitations are being enforced and they are insufficient to attain the Basin Plan objectives for DO, the Regional Board must assign waste load and load allocations to other sources of pollutants (including point and non-point sources) in order to attain the objectives. The Regional Board has failed to perform this action. Nothing precludes the Regional Board from recommending additional actions by other entities when those actions exceed the Regional Board's authority, but the Regional Board has no authority to require these actions nor can the Regional Board relax its standards for sources of pollutants or fail to enforce the existing

standards and ask the State Board, Army Corps of Engineers or other federal, state or local agencies to assume its obligations.

The Regional Board must comply with each of these standards. The proposed TMDL as drafted does not conform to these standards. Approval of the proposed TMDL would be arbitrary and capricious.

Very truly yours,

O'LAUGHLIN & PARIS LLP

By _____
Tim O'Laughlin

TO/jd
Attachments
cc: SJRGA (w/attachments)